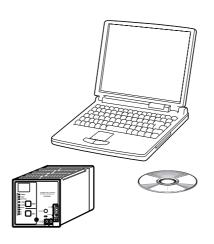
No. CP-SP-1187E

SLP-A45 Smart Loader Package

for the AUR450C Dynamic Self-Checking Burner Controller

User's Manual



Thank you for purchasing the SLP-A45 for AUR450C.

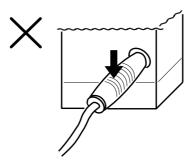
This manual contains information for ensuring correct use of the SLP-A45. It also provides necessary information for installation, maintenance, and trouble-shooting.

This manual should be read by those who design and maintain equipment that uses the AUR450C and SLP-A45. Be sure to keep this manual nearby for handy reference.

Azbil Corporation

IMPORTANT

Do not apply a strong force while connecting a loader plug. Doing so might damage the instrument.



! Handling Precautions
Application of excessive force to the loader plug might cause communication failure. If such failure happens, reconnect the plug correctly.

NOTICE

Be sure that the user receives this manual before the product is used.

Copying or duplicating this user's manual in part or in whole is forbidden. The information and specifications in this manual are subject to change without notice.

Considerable effort has been made to ensure that this manual is free from inaccuracies and omissions. If you should find an error or omission, please contact the azbil Group.

In no event is Azbil Corporation liable to anyone for any indirect, special or consequential damages as a result of using this product.

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The Role of This Manual

A total of five different manuals are available for the AUR450C. Read them as necessary for your specific requirements. If a manual you require is not available, contact the azbil Group or its dealer.



AUR450C Dynamic Self-Checking Burner Controller Manual No. CP-SP-1196E

Personnel in charge of design, mounting, operation, and maintenance of combustion equipment using the AUR450C should read this manual.

It describes the mounting, wiring, trial-run adjustment, maintenance, inspection of the AUR450C.



AUR450C Dynamic Self-Checking Burner Controller "Communications" Manual No. CP-SP-1176E

Those using the communications functions of the AUR450C should read this manual.

It is necessary for making the program of the device that uses AUR450C. An operation status and various data of AUR450C can be read by using the communication.

This manual describes a details of display, outline of CPL communications, communications procedures, a list of communications data, how to remedy trouble, and communications specifications.



SLP-A45 Smart Loader Package for the AUR450C Dynamic Self-Checking Burner Controller Manual No. CP-SP-1187E

This manual.

This manual is supplied with the SLP-A35/SLP-A45 Smart Loader Package.

The manual describes the software used to make various settings for AUR450C using a personal computer. Personnel in charge of design or setting of a system using AUR450C must thoroughly read this manual.

The manual describes installation of the software into a personal computer, operation of the personal computer, various functions, and setup procedures.



AUD300C1000 Advanced Ultraviolet Flame Detector Manual No. CP-SP-1141E

The manual describes the mounting, wiring, maintenance and inspection, and troubleshooting when the AUD300C1000 is built-into the combustion equipment.



AUD300C2000 Advanced Ultraviolet Flame Detector Manual No. CP-SP-1170E

The manual describes the mounting, wiring, maintenance and inspection, and troubleshooting when the AUD300C2000 is built-into the combustion equipment.

Organization of This User's Manual

This manual is organized as follows:

Chapter 1. INTRODUCTION

Be sure to read this chapter before you start using the Smart Loader Package.

This chapter describes the required operating environment for the personal computer and briefly introduces its features.

Chapter 2. INSTALLATION AND BASIC OPERATION

This chapter describes how to install, start up and quit the SLP-A45, its functions, screen configurations and basic operations.

Chapter 3. SETUP

This chapter describes methods of operations relating to the setup such as the environment setup, file operations, communications with the AUR450C and data setup.

Chapter 4. CHECKING THE STATUS OF THE AUR450C

This chapter describes how to display the status of the AUR450C, including operating conditions, alarm history, maintenance information, etc.

Chapter 5. CHECKING COMBUSTION STATUS

This chapter describes how to display the playback data stored in the AUR450C and the trend monitoring data relating to operating conditions.

Chapter 6. TROUBLESHOOTING

This chapter describes error messages that are displayed when trouble occurs and how to remedy trouble.

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Conventions Used in This Manual

The following conventions are used in this manual:

! Handling Precautions:

Handling Precautions indicate items that the user should pay attention to when handling the SLP-A45.

Mote:

(This indicates the item or page that the user is requested to refer to.

(1), (2), (3): Numbers within parentheses indicate steps in a sequence or parts of an

Notes indicate information that might benefit the user.

explanation.

[OK] button: Indicates a selectable button on a personal computer screen.

[Menu]: Indicates messages and menus displayed on the personal computer.

Indicates the order to select the [Menu] first and then select the $[\underline{Menu}] \rightarrow [\underline{Quit}]$:

[Quit] displayed on the personal computer.

Indicates the result of an operation, details displayed on the personal com->>:

puter or other devices, or the state of the device after operation.

[Ctrl] key, [A] key: Indicates keys on the keyboard.

[Ctrl]+[A] key: Indicates the operation of pressing the [A] key on the keyboard while the

[Ctrl] key is pressed.

Chapter 1. INTRODUCTION

1 - 1 Overview

The SLP-A45 (simply called "SLP" from here on) is an engineering tool for the AUR450C Dynamic Self-Checking Burner Controller (simply called "AUR450C" from here on).

The SLP runs on Windows 2000/XP/Vista/7 (simply called "Windows" from here on) on a personal computer.

Installation of the SLP on a personal computer allows the user to check the AUR450C's operating conditions or to configure the AUR450C from the PC. After setup, operation of the AUR450C is more convenient.

In addition, since the data gathered by the AUR450C can be read on the PC, it can be stored there as a file or displayed in graph format using commercially available spreadsheet software.

1 - 2 System Operating Environment

The following system environment is required for using the SLP:

■ Hardware

Item	Description			
Personal Computer	Target model	PC/AT compatibles with a Pentium chip or higher		
	Memory	32M byte or more		
	Operating system	Windows 2000/XP/Vista (32 bit)/7 (32 bit, 64 bit)		
' '		SVGA 800 X 600 dot or more, XGA 1024 X 768 dot or more		
	Serial port *	9-pin, serial port, 1 channel or more		
	Hard disk drive	Hard disk with at least 40M byte of free space		
	CD-ROM drive	1 drive or more		
	Pointing device	Windows-compatible mouse or equivalent device		

^{*} It is recommended to use a personal computer with 9-pin serial port built-in. If your personal computer does not have any serial port, you may use any of the extension adapters listed below to connect the loader cable.

However, note that the operation may become unstable depending on the

• Special interface (port replicator)

personal computer environment.

Adapter specially designed for each personal computer (special adapter for each personal computer model)

CF card adapter

CF232 manufactured by Elan Digital systems

URL: http://www.elandigitalsystems.com/interface/cf232.php

Operation confirmed personal computer, IBM's Thinkpad A31

REX-CF60 manufacture by RATOC.

URL: http://www.ratocsystems.com/products/subpage/cf60.html(Japanese)

USB adapter

USB-RSAQ3 manufactured by I•O DATA DEVICE, INC.

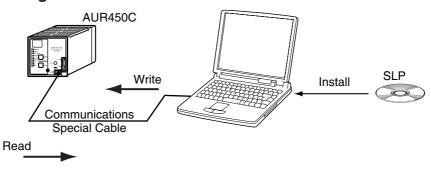
URL: http://www.iodata.jp/prod/mobile/serial/2004/usb-rsaq3/(Japanese)

Operation confirmed personal computer, IBM's Thinkpad A31

When connecting the USB cable, check the port No.

The port No. may vary depending on the USB cable connection position.

■ Hardware configuration



Chapter 2. INSTALLATION AND BASIC OPERATION

2 - 1 Installation, Starting up and Quitting the SLP

■ Installation

Install the SLP on the hard disc of personal computer.

Use the system disk that you have purchased as the backup system.

This section describes how to install the SLP on a personal computer.

! Handling Precautions

- This disk does not contain the operating system, and you cannot use without the operating system.
- If you start up the Installer while another application is running, the Installer may malfunction.

Remove other resident applications from their directories before starting up the Installer.

The SLP sometimes cannot be started up depending on the combination of other applications and drivers.

For details on Windows and personal computer settings, refer to the User's Manuals provided with Windows and the personal computer.

Installing the SLP

(1) Set the CD-ROM in the CD-ROM drive of your personal computer. >>The following screen appears:



- (2) Click [Install SLP-A45 for AUR450C] button.
- >>The installation program is then started up automatically and the following screen appears:

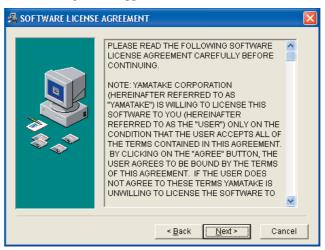


If the SLP having the old version has been installed, the screen shown below appears.

Click the [OK] button to uninstall the SLP-A45 having the old version.



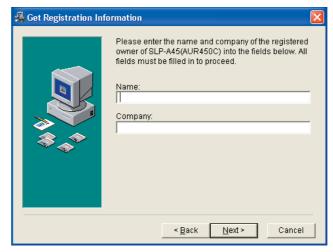
- (3) Click [\underline{N} ext >] button.
 - >>The following screen appears:



(4) If you agree to the software license agreement and wish to install the loader, click the [Next >] button.

If you abort the installation, click the [Cancel] button.

>>When clicking the $[\underline{Next} >]$ button, the following screen appears :



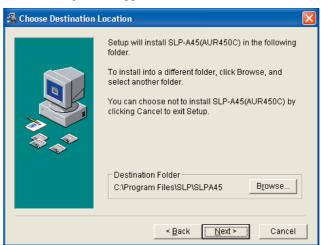
(5) Enter a registered user name and company name, and then click the [Next >] button.

>>The following screen appears:



(6) Click [Next >] button.

>>The following screen appears:

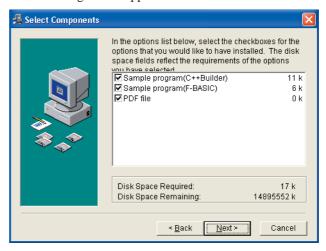


M Note

 $\bullet\,$ To change the installation destination directory, click [Browse...] button.

(7) Click [\underline{N} ext >] button.

>>The following screen appears:



M Note

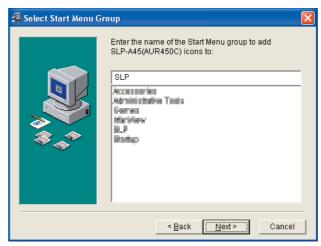
• Check on necessary files.

To display a PDF file, it is absolutely necessary to install Adobe Reader.

For details, refer to;

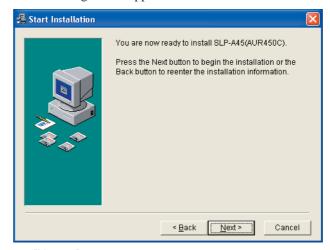
Note on next page.

- (8) Check on (put a check mark : ♥) software components you wish to install and click [Next >] button.
 - >>The following screen appears:



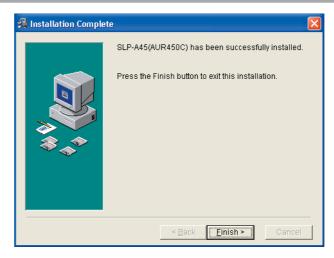
M Note

- To change the program folder, enter the new folder name.
- (9) Click [\underline{N} ext >] button.
 - >>The following screen appears:



(10)Click [\underline{N} ext >] button.

>>The following screen appears:



(11)Click [Finish >] button.

>>When the installation is completed successfully, the screen will return to the Windows screen.



- Installation of Adobe Reader

 If the Adobe Reader is not installed in your personal computer, install it using
 any of the following procedures:
 - Download the Adobe Reader from Adobe Systems' home page.
 - Install [adberdr60_enu_full.exe] from the CD-ROM.

■ Starting up the SLP

Double-click the SLP-A45(AUR450C) icon on the desk top or click [Start] button at the lower portion of the screen and select [Programs] \rightarrow [SLP] \rightarrow [SLP-A45(AUR450C)].

>>The SLP is started up and the menu window is displayed.

M Note

• For the operating system details and the mouse setup, refer to User's Manuals provided with Windows.

■ Quitting the SLP

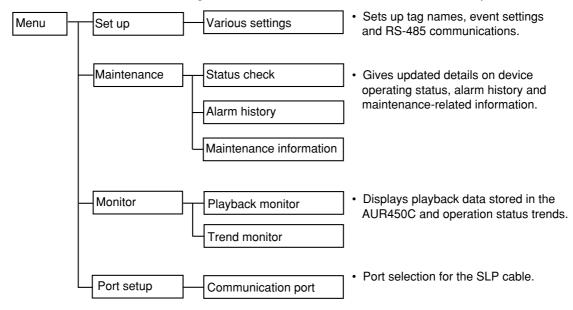
Click icon at the top right of the screen.

The operation is the same by selecting the [Menu] \rightarrow [Quit].

2 - 2 Description of Functions

■ SLP functions

The figure below shows the various functions and what they do.



■ Screen explanations

Menu screen

The picture below is basic SLP screen. When the SLP starts up and when subscreens are exited, this menu screen appears.



• Menu configuration list

Menu	Icon	Sub Menu	Description	Shortcut Keys
<u>M</u> enu	圈	Setup	Displays the setup window.	[Ctrl]+[S]
	1 m	Maintenance	Displays the maintenance window.	[Ctrl]+[J]
	the state of	Monitor	Displays the monitor window.	[Ctrl]+[M]
	3	Port setup	Changes the communication environment. For details how to setup, refer to; Step 1(setting up the port) (page 12).	[Ctrl]+[E]
	-	Quit	Quits the SLP.	[Ctrl]+[Q]
<u>H</u> elp	-	Version(A)	Displays the version information.	[Ctrl]+[A]

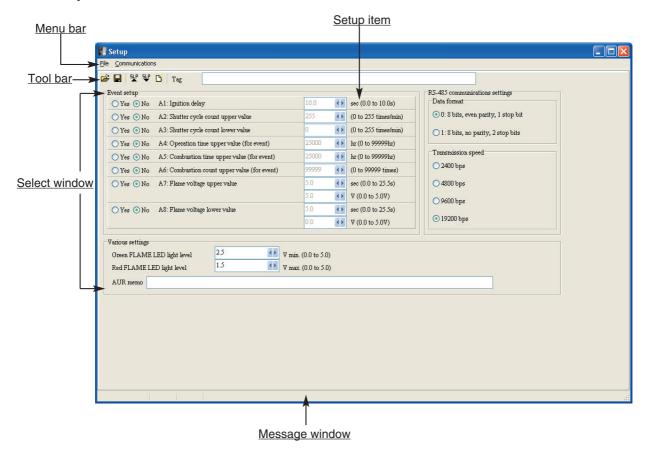
Chapter 3. SETUP

3 - 1 Setup screen and Menu configuration list

Overview

The setup screen is used to configure settings and write them to the AUR450C so that it functions according to the user's particular control requirements.

■ Setup screen



■ Menu configuration list

Menu	Icon	Sub Menu	Description	Shortcut Keys
<u>F</u> ile	Ä	<u>O</u> pen	Loads an existing settings data file.	[Ctrl]+[O]
		Save As	Saves the settings to a file with a file name provided by the user.	[Ctrl]+[S]
	-	Quit	Quits setup and returns to the main menu screen.	[Ctrl]+[Q]
<u>C</u> ommunications	Read (AUR450C to SLP)(R)		Reads settings from the AUR450C	[Ctrl]+[R]
	ŵ	Write (SLP to AUR450C)(<u>W</u>)	Writes settings to the AUR450C.	[Ctrl]+[W]
	D	Initialize settings (AUR450C)	Initializes the AUR450C using the default settings.	[Ctrl]+[N]

3 - 2 Method of Setup

Set up in the following steps:

Step 1: Setting up the port

Step 2: Setting up the data

Step 3: Saving setup data

Step 4: Writing the setup data

! Handling Precautions

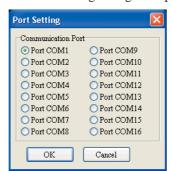
 When writing from the SLP to the AUR450C, or reading from the AUR450C to the SLP, be sure to perform step 1, setting up the port. Otherwise, [Can't open the communication port] is displayed and communications are not possible. After the environment setup has been done once or after a file operation, further setup is not required.

• Step 1 (setting up the port)

(1) Click the [Port setup] on the menu screen.

The operation is the same by selecting the [Ctrl] + [E] keys.

>>The Port Setting dialog box appears.

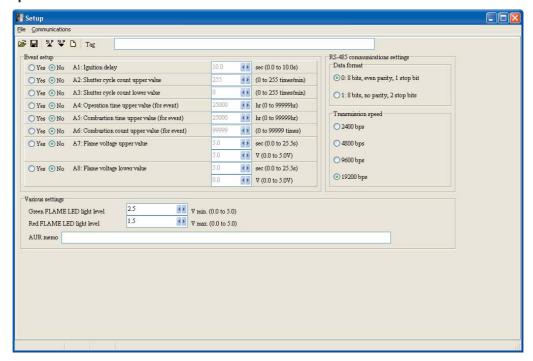


- (2) Set the communications port. Select the port to which the SLP cable is connected.
- (3) Click [OK] button.

Step 2 (setting up the data)

Click [Setup] on the menu screen. Set the various data.

Setup screen



[Tag]

If desired, enter a name for the device being used (etc.). Up to 33 characters, or 16 double-byte characters, can be entered.

[Event setup]

Select if each event condition is enabled ([Yes]) or disabled ([No]).

[RS-485 communications settings]

Set the data format and transmission speed.

[Various settings]

Input a light level for each color of FLAME LED.

[AUR memo]

Store information on maintenance, etc. as a memo. Up to 85 characters, or 42 double-byte characters, can be entered. Enter according to need.

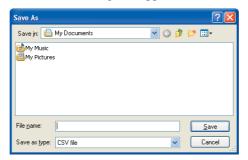
! Handling Precautions

Set the red FLAME LED light level ≤ the green FLAME LED light level.
 Failure to set correctly will result in the error message, [The red FLAME LED light level is ≥ the green FLAME LED light level,] and it will not be possible to save the settings.

Step 3 (saving setup data)

When all setup is finished (basic setup, extended setup, and playback setup), save the settings to a file. If the same parameters are desired again, setup will be easy.

- (1) The operation is the same by selecting the [File] \rightarrow [Save As] or [Ctrl]+[A] keys.
 - >>The Save As dialog box appears.



(2) Enter the file name, and click [Save] button.

• Step 4 (writing the setup data)

Write settings from the SLP or settings called up from a saved file to the AUR450C.

- (1) Use the special cable to connect the personal computer to the AUR450C body.
- (2) Turn the AUR450C ON.
- (3) Click **\(\frac{1}{2}\)** icon. The operation is the same by selecting [**\(\textit{C}\)**ommunications] → [Write (SLP to AUR450C)] in the menu bar.
 - >>The message [Save the settings to the AUR450C?] is displayed.
- (4) Click [OK] button.
 - >>This starts writing of the setup data. When writing ends, [Save cmpleted.] is displayed.
- (5) Click [OK] button.

! Handling Precautions

- If writing is not possible, refer to;
 - Chapter 6. TROUBLESHOOTING.

To verify the saved settings, read them back from the AUR450C.

(1) Click **!!** icon.

The operation is the same by selecting [\underline{C} ommunications] \rightarrow [Read (AUR450C to SLP)] in the menu bar.

- >>The message [Read settings from the AUR450C?] is displayed.
- (2) Click [OK] button.
 - >>When reading ends, [Reading completed.] is displayed.
- (3) Click [OK] button.

Chapter 4. CHECKING THE STATUS OF THE AUR450C

Overview

The status of the AUR450C, including operation status, alarm history and maintenance information, can be checked. To do so, click [Maintenance] on the main menu screen (page 10).

The maintenance screen is divided into two tabbed windows, as explained in detail on the following pages:

- Status check
 Displays information such as flame voltage and equipment information about the AUR450C.
- Alarm history
 Displays alarm history for the past 16 alarms.
- Maintenance information
 Displays equipment information for the AUR450C.

! Handling Precautions

 When writing data from the SLP to the AUR450C, or reading from the AUR350C to the SLP, be sure that the communications port has been set. Once the port has been set, no further setup is required unless the environment changes. For details how to setup, refer to;

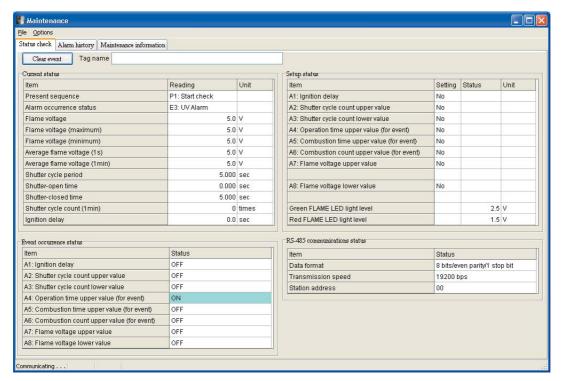
Step 1 (setting up the port) (page 12)

Menu configuration list

Menu	Sub Menu	Description	Shortcut Keys
<u>F</u> ile		Saves all information displayed on the maintenance screen.	-
	Quit	Quits the maintenance screen	. [Ctrl]+[Q]
<u>O</u> ptions	Command line	Displays a command line.	-

■ Screen explanations

Status check



The status check screen displays the following information:

[Tag name]

Displays the tag that was entered on the basic setup screen (see page 13).

[Current status]

Displays current status.

[Setup status]

Displays current setup status.

[Event occurrence status]

Displays the event occurrence status.

[RS-485 communications status]

Displays settings for RS-485 communications.

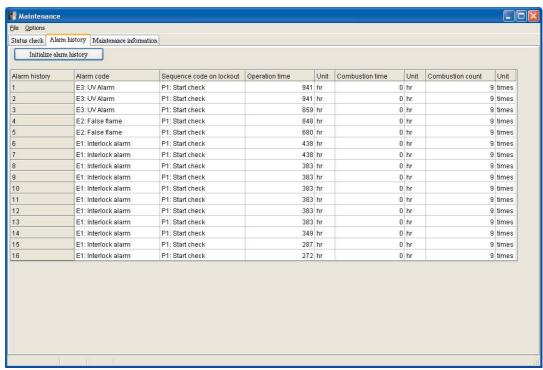
Button configuration list

Button	Description
Clear event	Clear the present event.



• When communications are normal, [Communicating ...] is displayed on the bottom left of the screen.

Alarm history



The alarm history screen displays alarm history for the past 16 alarms. The most recent alarm history is displayed as [Alarm history 1]. When a 17th alarm occurs, the oldest alarm history is deleted.

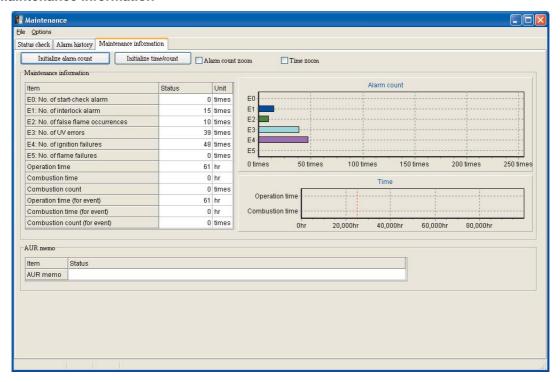
[Alarm history]

For each alarm occurrence, the alarm code, sequence code on lockout, cumulative operation time, cumulative combustion time and cumulative combustion count are displayed.

Button configuration list

Button	Description
Initialize alarm history	Initializes the designated alarm history.

Maintenance information



The maintenance screen displays the following information:

[Maintenance information]

Displays cumulative alarm count and other times/counts that are useful for maintenance.

[AUR memo]

Displays the AUR memo entered on the extended setup screen (see page 13).

Button configuration list

Button/Check box	Description
Initialize alarm count	Allows each alarm count to be initialized.
Initialize time/count	Allows each event time/count to be initialized.
Alarm count zoom	Zooms in on the alarm count graph when the checkbox is checked.
Time zoom	Zooms in on the time graph when the checkbox is checked.

Chapter 5. CHECKING COMBUSTION STATUS

Overview

Playback data stored in the AUR450C can be displayed, and the trend monitoring data relating to operating conditions can be checked. To do so, click [Monitor] on the main menu screen (page 10).

Monitor screen

There are two monitoring screens, one for playback and one for trends. Details are explained on the following pages:

· Playback monitor

This screen displays the four (max.) playback data items stored in the AUR450C. The displayed playback data can be saved and later read back.

- Saving of playback data as a CSV file
- Reading of saved playback data
- Copying of playback screen to the Windows clipboard

Trend monitor

This screen is for monitoring the running state of the AUR450C in the form of a trend graph.

- Screen display of trends for max. of eight data items
- · Saving of sampled data as CSV file
- Reading of CSV data
- Copying of trend screen to the Windows clipboard
- Data type

Flame voltage, Shutter cycle period, relay output, User-defined data (any analog data that can be communicated)

· Sampling cycle

Variable within the range 1 to 3600s

 Max. sampling count 60,000

M Note

• A "CSV file" is the data format that can be handled in third-party spreadsheet software such as Microsoft Excel. In this format, sampled trend data can be interpreted in spreadsheet software.

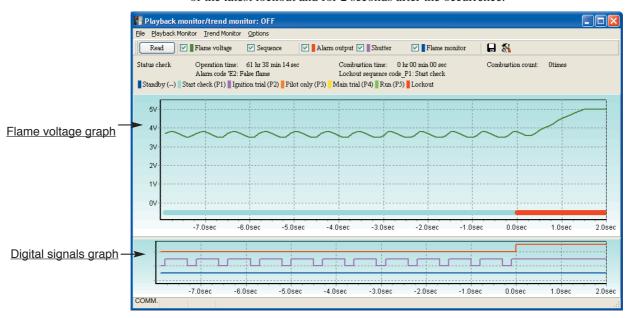
! Handling Precautions

Sampling cycle may change depending on the communications timing.
 When measuring with exact timing, use a recorder or data logger.

■ Screen explanations

Playback monitor

The playback monitor displays playback data for 8 seconds before the occurrence of the latest lockout and for 2 seconds after the occurrence.



· Menu configuration list

Menu	Icon	Sub Menu	Description	Shortcut Keys
<u>F</u> ile	-	Quit	Quit the playback monitor	[Ctrl]+[Q]
	-	Read	Read the playback data.	-
Playback monitor	-	Open CSV	Reads and displays CSV data saved in a file.	-
		Save CSV *	Outputs the playback data in CSV data format.	-
			Copies a flame voltage graph to the Windows clipboard.	-
	-		Outputs a digital signals graph to the Windows clipboard.	-
Trend monitor	-	-	Changes the display to the trend monitor.	-
<u>O</u> ptions		Command Line	Displays the command Line window.	-

^{*:} The CSV data output function saves playback monitor data that has been read from the AUR450C to a file. After CSV data has been read once and modified it cannot be saved to another CSV file.



• When communications are normal, [COMM.] is displayed on the bottom left of the screen.

How to operate the playback monitor

· Reading playback data

The playback monitor displays playback data for 8 seconds before the occurrence of the latest lockout and for 2 seconds after the occurrence. Therefore, be sure to wait 2 seconds after lockout before reading the data. If the data is read within 2 seconds, it might not be correctly displayed. If this happens, click [Read] again. In this case, the playback display background color will be blue.

! Handling Precautions

 When the device is not used (AUR450 power is OFF) for 4 hours or more, the playback data is deleted.

When the AUR450C and the loader are correctly connected, the operations described below are also available.

· Saving playback data

The data sampled using the playback monitor can be saved into a file in the CSV format. The sampled data saved in CSV format can be processed using spreadsheet applications, such as Microsoft Excel.

! Handling Precautions

• Before quitting the SLP, save the playback data. If not saved, the data will disappear.

· Reading of saved playback data

Playback data saved in CSV format can be displayed on the playback monitor screen. In this case, the screen background is orange.

• Use of the command line

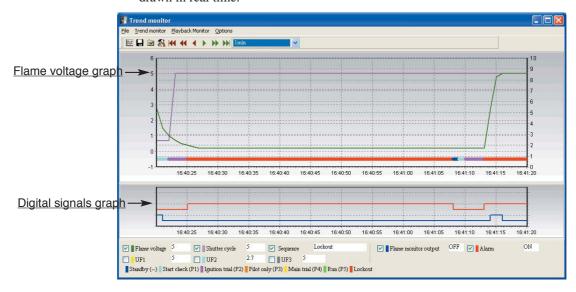
Data can be read or written or the mode switched by directly entering communications commands on the command line.

! Handling Precautions

- Transmission of the wrong command may result in trouble on the AUR450C. For this reason, take sufficient care when describing command types, addresses, data and other information.
- For details on communications commands and data addresses, refer to;
 - AUR450C "Communications" User's Manual CP-SP-1176E.

Trend monitor

By means of the connection to the AUR450C, operational trends are always drawn in real time.



Menu configuration list

Menu	Icon	Sub Menu		Description	Shortcut Keys
<u>F</u> ile	-	Quit		Quit the trend monitor	[Ctrl]+[Q]
Trend monitor	₩.	Trend monitor Start/Stop		Starts/stops the trend monitor	[Ctrl]+[T]
	-	CSV R	ead	Reads CSV data that has been saved to a file.	-
		Save CSV *		Outputs the trend data in CSV format.	[Ctrl]+[X]
	-	.,		Copies a flame voltage graph to the Windows clipboard.	-
	-	Copy digital signals graph to clipboard		Outputs a digital signals graph to the Windows clipboard.	-
Playback monitor	-	-		Changes the display to the playback monitor.	-
<u>O</u> ptions	िस्	Setup Trend monitor		Displays the Setup window.	-
	200		User function	For details, refer to; next page.	
	E	Command Line window.		Displays the Command Line.	-

^{*:} The CSV data output function saves playback monitor data that has been read from the AUR450C to a file. After CSV data has been read once and modified it cannot be saved to another CSV file.

· Icon list

lcon	Description
H	Returns the graph to the start time.
44	Returns the graph by 1/2 screen.
•	Returns the graph by 1/4 screen.
•	Advances the graph by 1/4 screen.
>>	Advances the graph by 1/2 screen.
>>	Advances the graph to the latest time.
1min 🕶	Specify a time scale of the graph. 1min. 2min. 10min. 1hr. 12hrs. 24hrs. Auto

How to operate the trend monitor screen

Setup

From the monitoring screen, select [Options] \rightarrow [Setup] to modify the settings shown below. Cycle, display high limit, and display low limit apply to all trends.

· Trend monitor

Setting Item	Description	Setting Range	Factory Setting
Cycle	Setting of sampling cycle	1 to 3600s	1
Display low limit of left axis	Lower value of vertical axis of screen display	-1999 to display upper limit	-1
Display high limit of left axis	Upper value of vertical axis of screen display	Display lower limit to 9999	6
Display low limit of right axis	Lower value of vertical axis of screen display	-1999 to display upper limit	-1
Display high limit of right axis	Upper value of vertical axis of screen display	Display lower limit to 9999	6

· User function

Setting Item	Description	Setting Range
Axis	, ,	0 : Left 1 : Right
User-defined address	Address of relevant data when the data type is set as "user type"	Address of communicable data
Decimal point	Number of digits to be displayed after the decimal point	0 to 3

M Note

For User-defined address, refer to;
 AUR450C "Communications" User's Manual CP-SP-1176E.

! Handling Precautions

• When the user-defined address is specified, make the decimal point setting.

· Starting the data sampling

When the setup is completed, start up the trend monitor.

Click icon.

The same operation can be started by selecting [Trend Monitor] \rightarrow [Trend Monitor Start].

The data sampling is started, and then the trend of the specified parameters is displayed on the screen.

- Once the trend monitor is started, it continues until the stop operation is performed or the data for 60,000 cycles is sampled.
- If the trend monitor is not stopped, it will continue until data has been sampled 60,000 times.
- The screen can be change to the "Numeric Monitor" screen while the trend monitor is running. However, the loader cannot be exited and the screen cannot be change to the "Setup" screen without first quitting the trend monitor.

· Stopping the data sampling

Select [Trend Monitor] → [Trend Monitor Stop].

The trend monitor is then stopped.

· Saving sampled data

The data sampled using the trend monitor can be saved into a file in the CSV format. The sampled data saved in the CSV format can be processed using spreadsheet applications, such as Microsoft Excel.

! Handling Precautions

- The data can be saved into a file even while the trend monitor is running.
- Before quitting the SLP, save the playback data. If not saved, the data will disappear.

Reading the data sampling

Trend monitor data that has been saved can be displayed on the trend monitor screen. In this case, the screen background is indigo blue.

Saving copy flame voltage graph and copy digital signals graph to clipboard

The information displayed on the trend monitor screen can be saved as is by copying it to the Windows clipboard.

Chapter 6. TROUBLESHOOTING

6 - 1 Error Messages

■ Communications error messages

Category	Message	Description	Remedy
Communications error	Can't open the communications port.	Other software that uses the communications port has tried to use the port at the same time.	Do not use, at the same time, other software that uses the communications port.
		Wrong communications port number.	Refer to; section 6-2,"Remedies for Communication Errors" (page 27)
	A communications error occurred. Abort: End the program. Retry: Try again to connect.	A system error occurred.	After checking section 6-2, "Remedies for Communication Errors" (page 27), either quit or restart the loader.
	A communications error occurred. The program has ended.		After checking section 6-2, "Remedies for Communication Errors" (page 27), restart the loader.
	A communications error occurred. To resume, read/write/clear again.		After checking section 6-2, "Remedies for Communication Errors" (page 27), try the loader operation again.
AUR450C status error	Can't support the connected SLP-A45	The loader currently in use is not compatible with the AUR450C.	Contact the azbil Group or its dealer.
	Connected instruments may not be supported by this loader. Check the listing.	Wrong communications port number. SLP jack is not fully connected. No power supply of AUR450C.	Refer to; Section 6-2,"Remedies for Communication Errors" (page 27)

■ File error messages

Category	Message	Description	Remedy
File name error	This filename is not valid.	An invalid file name has been entered.	Enter the correct file name.
	This file cannot be found. Make sure that the correct path and filename are given.	A non-existent file name has been entered.	Correctly enter the name of an existent file.
	This filename is a reserved device name. Use a different filename.	A file name reserved as a device name has been entered.	Enter the correct file name.
Disk error	Not enough free space on disk.	There is not enough free space on disk.	Secure enough free space on disk.
	The device is not ready.	The disk is not prepared.	Prepare a disk, and repeat the operation.
	Cannot make file.	The save destination is a CD-ROM.	Save to a different destination.
	File name too long.	The file name is too long.	Limit file names to 255 or less characters.
File error	Not a configuration file.	The indicated file is not a valid configuration file.	Select a valid configuration file.

■ Startup error messages

Category Message		Description	Remedy	
Loader system error	· ·	An attempt was made to start up three or more SLP-A45s at once.	Click [OK] button.	

■ Other error messages

Message	Description	Remedy
The red FLAME LED light level is >= the green FLAME LED light level.	The value set for the red FLAME LED light level was not less than or equal to the value of the green FLAME LED light level.	Set the red FLAME LED light level ≤ green FLAME LED light level.

6 - 2 Remedies for Communications Errors

• When [Can't open the communications port] is displayed.

From the Windows control panel, use the device manager to check the current COM port setting.

[Control Panel] \rightarrow [System] \rightarrow [Hardware] \rightarrow [Device Manager] If a USB cable is used, the COM port may differ according to the USB connector location.

• When [A communications error occurred] is displayed.

Check the SLP cable. The SLP may not be fully connected. Make sure that power is being supplied to the devices.

 When [Connected instruments may not be supported by this loader. Check the listing] is displayed.

Change the connecting instruments to the AUR450C.

Check the SLP cable. The SLP may not be fully connected. Make sure that power is being supplied to the devices.

Revision History

Printed date	Manual Number	Edition	Revised pages	Description
Aug. 2005	CP-SP-1187E	1st Edition		
May 2008		2nd Edition	10	Menu screen changed.
Apr. 2009		3rd Edition	Endpaper End of a book	Manual name changed. RESTRICTIONS ON USE deleted. Terms and Conditions added.
Sep. 2009		4th Edition	i	Manual name changed.
Apr. 2012		5th Edition	1, 2, 27 3 21 Back cover	Descriptions were changed because of change of the company name from Yamatake to Azbil. Descriptions were changed due to compatibility with Windows 7. The [SLP-A45/SLP-35 install] screen was changed. Handling precaution of Reading playback data was added. Terms and Conditions was changed.

Terms and Conditions

We would like to express our appreciation for your purchase and use of Azbil Corporation's products.

You are required to acknowledge and agree upon the following terms and conditions for your purchase of Azbil Corporation's products (field instruments, control valves, and control products), unless otherwise stated in any separate document, including, without limitation, estimation sheets, written agreements, catalogs, specifications and instruction manuals.

1. Warranty period and warranty scope

1.1 Warranty period

Azbil Corporation's products shall be warranted for one (1) year from the date of your purchase of the said products or the delivery of the said products to a place designated by you.

1.2 Warranty scope

In the event that Azbil Corporation's products has any failure attributable to azbil during the aforementioned warranty period, azbil shall, without charge, deliver a replacement for the said product to the place where you purchased, or repair the said product and deliver it to the aforementioned place.

Notwithstanding the foregoing, any failure falling under one of the following shall not be covered under this warranty:

- (1) Failure caused by your improper use of Azbil Corporation's products (noncompliance with conditions, environment of use, precautions, etc. set forth in catalogs, specifications, instruction manuals, etc.);
- (2) Failure caused for other reasons than Azbil Corporation's products;
- (3) Failure caused by any modification or repair made by any person other than azbil or azbil's subcontractors;
- (4) Failure caused by your use of Azbil Corporation's products in a manner not conforming to the intended usage of that product;
- (5) Failure that the state-of-the-art at the time of Azbil Corporation's shipment did not allow us to predict; or
- (6) Failure that arose from any reason not attributable to Azbil Corporation, including, without limitation, acts of God, disasters, and actions taken by a third party.

Please note that the term "warranty" as used herein refers to equipment-only-warranty, and Azbil Corporation shall not be liable for any damages, including direct, indirect, special, incidental or consequential damages in connection with or arising out of Azbil Corporation's products.

2. Ascertainment of suitability

You are required to ascertain the suitability of Azbil Corporation's products in case of your use of the same with your machinery, equipment, etc. (hereinafter referred to as "Equipment") on your own responsibility, taking the following matters into consideration:

- (1) Regulations and standards or laws that your Equipment is to comply with.
- (2) Examples of application described in any documents provided by Azbil Corporation are for your reference purpose only, and you are required to check the functions and safety of your Equipment prior to your use.
- (3) Measures to be taken to secure the required level of the reliability and safety of your Equipment in your use Although Azbil Corporation is constantly making efforts to improve the quality and reliability of Azbil Corporation's products, there exists a possibility that parts and machinery may break down. You are required to provide your Equipment with fool-proof design, fail-safe design, anti-flame propagation design, safety design, or the like so that the said Equipment may satisfy the level of the reliability and safety required in your use, whereby preventing any occurrence of physical injuries, fires, significant damage, and so forth.

3. Precautions and restrictions on application

Azbil Corporation's products other than those explicitly specified as applicable (e.g. azbil Limit Switch For Nuclear Energy) shall not be used in a nuclear energy controlled area (radiation controlled area). Any Azbil Corporation's products shall not be used for/with medical equipment. In addition

you are required to conduct a consultation with our sales representative and understand detail specifications, cautions for operation, and so forth by reference to catalogs, specifications, instruction manual, etc. in case that you intend to use Azbil Corporation's products for any purposes specified in (1) through (6) below.

Moreover, you are required to provide your Equipment with fool-proof design, fail-safe design, anti-flame propagation design and other designs of protection/safety circuit on your own responsibility to ensure the reliability and safety, whereby preventing problems caused by failure or nonconformity.

- (1) For use under such conditions or in such environments as not stated in technical documents, including catalogs, specification, and instruction manuals
- (2) For use of specific purposes, such as:
 - * Nuclear energy/radiation related facilities

[For use outside nuclear energy controlled areas] [For use of Azbil Corporation's Limit Switch For Nuclear Energy]

- * Machinery or equipment for space/sea bottom
- * Transportation equipment

[Railway, aircraft, vessels, vehicle equipment, etc.]

- * Antidisaster/crime-prevention equipment
- * Burning appliances
- * Electrothermal equipment
- * Amusement facilities
- (3) Supply systems such as electricity/gas/water supply systems, large-scale communication systems, and traffic/air traffic control systems requiring high reliability
- (4) Facilities that are to comply with regulations of governmental/public agencies or specific industries
- (5) Machinery or equipment that may affect human lives, human bodies or properties
- (6) Other machinery or equipment equivalent to those set forth in items (1) to (5) above which require high reliability and safety

4. Precautions against long-term use

Use of Azbil Corporation's products, including switches, which contain electronic components, over a prolonged period may degrade insulation or increase contact-resistance and may result in heat generation or any other similar problem causing such product or switch to develop safety hazards such as smoking, ignition, and electrification.

Although acceleration of the above situation varies depending on the conditions or environment of use of the products, you are required not to use any Azbil Corporation's products for a period exceeding ten (10) years unless otherwise stated in specifications or instruction manuals.

5. Recommendation for renewal

Mechanical components, such as relays and switches, used for Azbil Corporation's products will reach the end of their life due to wear by repetitious open/close operations.

In addition, electronic components such as electrolytic capacitors will reach the end of their life due to aged deterioration based on the conditions or environment in which such electronic components are used. Although acceleration of the above situation varies depending on the conditions or environment of use, the number of open/close operations of relays, etc.

as prescribed in specifications or instruction manuals, or depending on the design margin of your machine or equipment, you are required to renew any Azbil Corporation's products every 5 to 10 years unless otherwise specified in specifications or instruction manuals.

Field instruments (sensors such as pressure/flow/level sensors, regulating valves, etc.) will reach the end of their life due to aged deterioration of parts.

For those parts that will reach the end of their life due to aged deterioration, recommended replacement cycles are prescribed. You are required to replace parts based on such recommended replacement cycles.

6. Other precautions

Prior to your use of Azbil Corporation's products, you are required to understand and comply with specifications (e.g., conditions and environment of use), precautions, warnings/cautions/notices as set forth in the technical documents prepared for individual Azbil Corporation's products, such as catalogs, specifications, and instruction manuals to ensure the quality, reliability, and safety of those products.

7. Changes to specifications

Please note that the descriptions contained in any documents provided by Azbil Corporation are subject to change without notice for improvement or for any other reason.

For inquires or information on specifications as you may need to check, please contact our branch offices or sales offices, or your local sales agents.

8. Discontinuance of the supply of products/parts

Please note that the production of any Azbil Corporation's products may be discontinued without notice.

For repairable products, we will, in principle, undertake repairs for five (5) years after the discontinuance of those products. In some cases, however, we cannot undertake such repairs for reasons, such as the absence of repair parts.

For field instruments, we may not be able to undertake parts replacement for similar reasons.



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Specifications are subject to change without notice. (09)

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